

## Curriculum Vitae

*TIMOTHY BRUCE EDRINGTON, O.D., M.S.*

### PERSONAL

Home Address:

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Office Address:

2575 Yorba Linda Blvd.  
Fullerton, California 92653

### EDUCATION

Valparaiso University

Summer ---

Indiana State University

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Indiana University

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Received Bachelor of Science in Optometry degree from Indiana University in ---

Received Doctor of Optometry degree from Indiana University in ---

Received Master of Science in Higher Education from California State University at Fullerton in ---

### OCCUPATIONAL

Optometry Officer, United States Army (Walter Reed Hospital, Washington, D.C.), 1974-1976

Private Optometric Practice, 1976-1978

Part-time Clinical Faculty at the University of Houston School of Optometry, 1978

Part-time Private Optometric Practitioner, 1980-1984

### PRESENT POSITION

Southern California College of Optometry

Full-time Faculty, 1978-Present

Professor, 1994-Present

Associate Professor, 1987- 1994

Assistant Professor, 1981-1987

Chief, Cornea and Contact Lens Service, 1983-2001

Coordinator, Cornea and Contact Lens Residency, 1991- 1995, 2001-present

## HONORS AND AWARDS

Teacher of the Year – Southern California College of Optometry  
2005 (Class of 2007)  
2001 (Class of 2003)  
1999 (Class of 2001)  
1984 (Class of 1986)  
1981 (Class of 1981)

American Academy of Optometry Garland W. Clay Award  
1997

Dr. Richard Hemenger Research Award  
2001 (Inaugural Award)

Consultant to the Ophthalmic Devices Panel of the Center for Devices and Radiological Health  
of the Food and Drug Administration (FDA)  
2001 – present

First Century Honoree – Southern California College of Optometry  
2004

## PUBLICATIONS

Kurashige LT, Kataoka JE, Edrington TB, Vehige JG. Protein deposition on hydrogel contact lenses: A comparison study of enzymatic cleaners. *ICLC* 1987; 14(4):150-8

Edrington TB, Ackley KD. Evaluation of the Toric Tamer. *Contact Lens Spectrum* 1989; 4(3):77-80

Edrington T, Stewart B, Woodfield D. Guest editorial: Toric base curve rotation on toric corneas. *J Am Optom Assoc* 1989; 60(3):162

Peyton SM, Joyce RG, Edrington TB. Soft contact lens and corneal changes associated with Visine use. *J Am Optom Assoc* 1989; 60(3):207-10

Larcabal JE, Hinrichs CA, Edrington TB, Kurashige LT. A comparison study of enzymatic cleaners: Papain versus Subtilisin A. *ICLC* 1989; 16(11&12):318-21

Gentsch TF, Edrington TB. The bleaching effects of hydrogen peroxide on Durasoft 3 Colors. *Contact Lens Spectrum* 1990; 5(7):53-6

Simmons PA, Edrington TB, Hsieh L, Wang L. Bacterial contamination rate of soft contact lens cases. *ICLC* 1991; 18(9&10): 188-90.

House HO, Leach NE, Edrington TB, Gunning JN, Parsick SJ, Cyert L, Marsden HJ, Dvorak DG, Toscano FR, Walter DE. Contact lens daily cleaner efficacy: multipurpose versus single-purpose products. *ICLC* 1991; 18(11 & 12):238-43.

Gordon M, Zadnik K, Morgan D, Barr J, Edrington T, and the Contact Lens Evaluation in Keratoconus Study Group. Improving estimates of sample yield in clinical trials. *Proceedings of the Biopharmaceutical Section of the American Statistical Association*, 1991.

Watanabe RK, Edrington TB. Prosthetic lens masks corneal scar, matches fellow iris. *Review of Optometry* 1992; April; 129(4):92-3.

Larragoiti ND, Diamos ME, Simmons PA, Edrington TB. A comparative study of techniques for decreasing contact lens storage case contamination. *J Am Optom Assoc* 1994;65(3):161-3

Begley CG, Edrington TB, Chalmers RL. Effect of lens care systems on corneal fluorescein staining and subjective comfort in hydrogel lens wearers. *ICLC* 1994;21(1&2):7-12

Edrington TB, Zadnik K, Barr JT. Keratoconus. *Optometry Clinics* 1995;4(3):65-73

Simmons PA, Sun CM, Yamamoto BA, Edrington TB. Comparison of surfactant cleaning times on protein deposit removal from hydrogel lenses. *ICLC* 1995;22(1&2):16-21

Zadnik K, Barr JT, Gordon MO, Edrington TB for the CLEK Study Group. Biomicroscopic signs and disease severity in keratoconus. *Cornea* 1996;15(2):139-46

Joe JJ, Marsden HJ, Edrington TB. The relationship between corneal eccentricity and improvement in visual acuity with orthokeratology. *J Am Optom Assoc* 1996;67(2):87-97

Begley CG, Barr JT, Edrington TB, Long WD, McKenney CD, Chalmers RL. Characteristics of corneal staining in hydrogel contact lens wearers. *Optometry and Vision Science* 1996;73(3):193-200 (Received AAO Garland W. Clay Award 1997)

Barr JT, Gordon MO, Zadnik K, Pellican K, Edrington TB, and the CLEK Study Group. Photodocumentation of corneal scarring. *J Refract Surg* 1996;12(4):492-500

Edrington TB, Barr JT, Zadnik K, Davis LJ, Gundel RE, Libassi DP, McMahon TT, and Gordon MO. Standardized rigid contact lens fitting protocol for keratoconus. *Optometry and Vision Science* 1996;73(6):369-75

Simmons PA, Edrington TB, Lao KF, Concepcion LL. The efficacy of disinfection systems for in-office storage of hydrogel contact lenses. *ICLC* 1996;23(3):94-8

Simmons PA, Edrington TB, Pfondevida CJ, Lee M, Wechsler S. Comparison between evening and morning surfactant cleaning of hydrogel contact lenses. *ICLC* 1996;23(5):172-6

Gundel RE, Libassi DP, Zadnik K, Barr JT, Davis L, McMahon TT, Edrington TB, Gordon MO. Feasibility of fitting contact lenses with apical clearance in keratoconus. *Optometry and Vision Science* 1996;73(12):729-32

Ly VT, Simmons PA, Edrington TB, Wechsler S, DeLand PN. Efficacy of hand washing procedures on bacterial contamination of hydrogel contact lenses. *Optometry and Vision Science* 1997;74(5):

Edrington TB, Szczotka LB, Begely CG, Burger DS, Wilson BS, Barr JT, Zadnik K, Gordon MO and The CLEK Study Group. Repeatability and agreement of two corneal-curvature assessments in keratoconus: keratometry and the first definite apical clearance lens (FDACL). *Cornea* 1998;17(3):267-77

Edrington TB. Diagnosing and fitting irregular corneas. *Contact Lens Spectrum Supplement* 1998;13(11):3s-5s

Zadnik K, Barr JT, Edrington TB, Everett DF, Jameson M, McMahon TT, Sterling JL, Wagner H, Gordon MO, and The CLEK Study Group. Baseline findings in the Collaborative Longitudinal Evaluation of Keratoconus (CLEK) Study. *Investigative Ophthalmology & Visual Science* 1998;39:2537-46

Simmons PA, Ridder WH, Edrington TB, Ho S, Lau KC. Passive protein removal by two multipurpose lens solutions: comparison of effects on *in vitro* deposited and patient-worn hydrogel contact lenses. *ICLC* 1999;26(2):33-8

McMahon TT, Shin JA, Newlin A, Edrington TB, Sugar J, Zadnik K. Discordance for keratoconus in two pairs of monozygotic twins. *Cornea* 1999;18(4):444-51

Edrington TB. Toric soft contact lenses: they're not hard to fit. *CL Spectrum* 1999;14(6):46-8

Edrington TB, Szczotka LB, Barr JT, Achtenberg JF, Burger DS, Janoff AM, Olafsson HE, Chun MW, Boyle JW, Gordon MO, Zadnik K and The CLEK Study Group. Rigid contact lens fitting relationships in keratoconus. *Optometry and Vision Science* 1999;76(10):692-9

Kame GY, Abo JT, Kame RT, Edrington TB, Herman JP, Matsuda LK, De Land P. The incidence of glassy corneal striae. *ICLC* 1999;26(6):147-51

Barr JT, Zadnik K, Wilson BS, Edrington TB, Everett DF, Fink BA, Shovlin JP, Weissman BA, Siegmund K, Gordon MO and The CLEK Study Group. Factors associated with corneal scarring in the Collaborative Longitudinal Evaluation of Keratoconus (CLEK) Study. *Cornea* 2000;19:501-7

Zadnik K, Barr JT, Edrington TB, Nichols JJ, Wilson BS, Siegmund K, Gordon MO and The CLEK Study Group. Corneal scarring and vision in keratoconus: a baseline report from the Collaborative Longitudinal Evaluation of Keratoconus (CLEK) Study. *Cornea* 2000;19:804-12

Fink BA, Barr JT, Edrington TB, Pierce GE, Schechtman KB, Rah MJ, Flom R, Zadnik K and The CLEK Study Group. A comparison of two methods of evaluating cornea-to-contact lens base curve fluorescein patterns in keratoconus. *Optometry and Vision Science* 2001;78(8):589-98

Nichols KK, Mitchell GL, Stonebraker Simon KM, Chivers DA, Edrington TB. Corneal staining in hydrogel lens wearers. *Optometry and Vision Science* 2002;79(1):20-30

Edrington TB and The CLEK Study Group. What the CLEK Study means to you. *Review of Optometry* 2002;139(4):61-64

Jung JY, Edrington TB. Contact lenses for patients with astigmatism. *CL Spectrum* 2003;18(3):30-5

Begley CG, Chalmers RL, Abetz L, Venkataraman K, Mertzanis P, Caffery BA, Snyder C, Edrington T, Nelson D, Simpson T. The relationship between habitual patient-reported symptoms and clinical signs among patients with dry eye of varying severity. *IOVS* 2003;44:4753-61

Edrington TB, Gundel RE, Libassi DP, Wagner H, Pierce GE, Walline JJ, Barr JT, Olafsson HE, Steger-May K, Achtenberg J, Wilson BS, Gordon MO, Zadnik K, CLEK Study Group. Variables affecting rigid contact lens comfort in the Collaborative Longitudinal Evaluation of Keratoconus (CLEK) Study. *Optometry and Vision Science* 2004;81:182-8

Nichols JJ, Steger-May K, Edrington TB, Zadnik K, the CLEK Study Group. The relation between disease asymmetry and severity in keratoconus. *British Journal of Ophthalmology* 2004;88(6):788-91

Twa MD, Nichols JJ, Joslin CE, Kollbaum PS, Edrington TB, Bullimore MA, Mitchell GL, Cruickshanks KJ, Schanzlin DJ. Characteristics of corneal ectasia after LASIK for myopia. *Cornea* 2004;23(5):447-57

Mertzanis P, Abetz L, Rajagopalan K, Espindle D, Chalmers R, Snyder C, Caffery B, Edrington T, Simpson T, Nelson JD, Begley C. The relative burden of dry eye in patients' lives: comparisons to a U.S. normative sample. *IOVS* 2005;46(1):46-50

Melton AP, Melton RJ, Edrington TB, Melton JW, Bullimore MA, De Land P. A comparison of monovision: contact lenses versus laser refractive surgery. (Submitted to *Optometry and Vision Science* April 2000)

---Not published at this time.

---Not published at this time.

---Not published at this time.

**PUBLICATIONS - Contact Lens Spectrum RGP Insights and Primer Columns (Contributing Editor)**

Keratoconus problem solving. Contact Lens Spectrum 1998;13(3):18

Improving centration with toric secondary curves. Contact Lens Spectrum 1998;13(6):18

Bitorics are simple...optical cross my heart. Contact Lens Spectrum 1998;13(9):18

Pinguecula and pterygium: to fit or not to fit. Contact Lens Spectrum 1998; 13 (12):18  
(Reprinted in Optical Prism 1999;16(9):36

Toric soft contact lenses: they're not hard to fit. Contact Lens Spectrum 1999;14(6):46

Corneal staining in hydrogel lens wearers. Contact Lens Spectrum 1999;14(8)

Who goofed? I've got to know! Reply to a reader's concerns. Contact Lens Spectrum 2000;15(2):19

Toric problem-solving tidbits. Contact Lens Spectrum 2000;15(6):19

More torics for the toolbox. Contact Lens Spectrum 2000;15(10):17

Rigid contact lenses – why fit 'em? Contact Lens Spectrum 2001;16(1):49

Soft contact lenses – why fit 'em? Contact Lens Spectrum 2001; 16(2):35

Tear lens = base curve – corneal curve. Contact Lens Spectrum 2001;16(3):46

Prescribing for astigmatism: rigid or soft toric lenses? Contact Lens Spectrum 2001;16(4):48

Toric soft contact lenses. Contact Lens Spectrum 2001;16(5):46

Contact lens management of the irregular cornea. Contact Lens Spectrum 2001;16(6):48

Take the time to teach. Contact Lens Spectrum 2001;16(7):60

Follow through on follow-up care. Contact Lens Spectrum 2001;16(8):49

Interpreting fluorescein patterns. Contact Lens Spectrum 2001;16(9):46

RGP problem solving 101. Contact Lens Spectrum 2001;16(10):46

Toric rgp indications. Contact Lens Spectrum 2001;16(11):48

Prescribing bitorics. Contact Lens Spectrum 2001;16(12):42

Peripheral corneal desiccation. Contact Lens Spectrum 2002;17(1):46

Bend me, shape me: lens flexure. Contact Lens Spectrum 2002;17(2):48

What's the solution? Contact Lens Spectrum 2002;17(3):44

Keep up-to-date with changes in soft lens solutions. Contact Lens Spectrum 2002;17(4):46

Aspheric what? Contact Lens Spectrum 2002;17(5):50

Creating a better locus of focus. Contact Lens Spectrum 2002;17(6):44

Fitting keratoconus. Contact Lens Spectrum 2002;17(7):48

Post-PK contact lens care. Contact Lens Spectrum 2002;17(8):50

Post-RK contact lens care. Contact Lens Spectrum 2002;17(9):46

We have edge lift. Contact Lens Spectrum 2002;17(10):49

The end is near. Contact Lens Spectrum 2002;17(11):49

That's all, folks! Contact Lens Spectrum 2002;17(12):50

A surgical option for correcting irregular astigmatism. Contact Lens Spectrum 2004;19(8):15

Using larger diameter GPs to fit irregular corneas. Contact Lens Spectrum 2004;19(12):16

## **PUBLICATIONS - BOOK REVIEWS**

The Slit Lamp Primer, by Janice K. Ledford and Valerie N. Sanders. *Optometry and Vision Science* 1999;76(3):133

Clinical Manual of Specialized Contact Lens Prescribing by TR Scheid, ed. *Optometric Education* 2004;29(3):101

## **PUBLICATIONS - BOOK CHAPTERS**

Zadnik K, Edrington TB. Keratoconus. In Silbert JA (ed): *Anterior Segment Complications of Contact Lens Wear*. Churchill Livingstone, New York, NY 1994; Second Edition 1999.

Edrington TB. Contact lens management of keratoconus. In Schwartz CA (ed): *Specialty Contact Lenses: A Fitter's Guide*. Saunders, Philadelphia, PA 1996

Edrington TB. Keratoconus. In Ettinger ER and Rouse MW (eds): *Clinical Decision Making in Optometry*. Butterworth-Heinemann, Newton, MA 1996

Edrington TB. Rigid gas-permeable lenses for astigmatism. In Hom M (ed): Manual of Contact Lens Prescribing and Fitting. Butterworth-Heinemann, Boston, MA 1997; Second Edition 2000

Edrington TB, Szczotka LB, Shin JA, Marsden HM. Irregular corneas: grand rounds. In Bennett ES and Weissman BA (eds): Clinical Contact Lens Practice. Lippincott Williams & Wilkins, Philadelphia, PA and New York, NY 1998. Chapter 45A

Edrington TB. Soft versus rigid toric lenses. In Watanabe RK (Ed.): Clinical Cases in Contact Lenses (pp.35-38). Butterworth-Heinemann, Boston, MA 2002

Edrington TB. Difficult rigid gas-permeable lens fits. In Watanabe RK (Ed.), Clinical Cases in Contact Lenses (pp. 185-8). Butterworth-Heinemann, Boston, MA 2002

Holzchuh N, Coral-Ghanem C, Edrington TB. Disposable and planned replacement contact lenses. In Mannis MJ, Zadnik K, Coral-Ghanem C, Kara-Jose N (ed): Contact Lenses in Ophthalmic Practice. Springer, New York, NY 2003, Chapter 10

Edrington TB and de Souza Pena A. Keratoconus. In Mannis MJ, Zadnik K, Coral-Ghanem C, Kara-Jose N (ed): Contact Lenses in Ophthalmic Practice. Springer, New York, NY 2003, Chapter 18

Edrington TB and Schornack JA. Initial Evaluation. In Bennett ES and Weissman BA (ed): Clinical Contact Lens Practice. Lippincott Williams & Wilkins, Philadelphia, PA 2005, Chapter 8

Edrington TB, Szczotka-Flynn LB, Yu JA, Marsden HJ. Irregular Corneas Grand Rounds. In Bennett ES and Weissman BA (ed): Clinical Contact Lens Practice. Lippincott Williams & Wilkins, Philadelphia, PA 2005, Chapter 49

## **PUBLICATIONS - RESEARCH ABSTRACTS**

Vehige JG, Wong, GG, Edrington, TB. A colorimetric method for verifying oxygen transmission (Dk/L) of rigid gas permeable lenses. *Am J Optom Physiol Opt* 1983; 37

Ekelund NC, Heiting GJ, Edrington TB. Protein deposition on hydrophilic contact lenses: a comparison study of lens materials. *Am J Optom Physiol Opt* 1983; 38

Edrington TB. Hard contact lens flexure. *Am J Optom Physiol Opt* 1985; 38

Edrington TB, Ilsen P, Parker L. Videotape presentation of fluorescein pattern analysis. *Am J Optom Physiol Opt* 1986;71

Holden T, Bahr K, Koers D, Edrington TB. The effect of secondary curve liftoff on peripheral corneal desiccation. *Am J Optom Physiol Opt* 1987; 7

Edrington TB, Stewart B, Woodfield D. Analysis of toric base curve contact lens rotation on toric corneas. *Am J Optom Physiol Opt* 1987; 8

Edrington TB, Ackley KD. Evaluation of the Toric Tamer: A computer assisted technique of toric soft contact lens prescription determination. *Am J Optom Physiol Opt* 1988; 12

Prescher RC, Edrington TB, Bywater MT. In situ flexure effects of fluoropolymers: a comparative study. *Optometry and Vision Science* 1989; 87

Simmons PA, Edrington TB, Hsieh L, Wang LW. The incidence of bacterial contamination in contact lens case caps and wells: a comparison among cold chemical disinfection systems. *Optometry and Vision Science* 1990; 4

Edrington TB, LaMotte J, Packard R, Brown S. Using tear lysozyme levels to predict protein deposition on hydrogel lenses. *Optometry and Vision Science* 1990; 5

Edrington TB, Zadnik K, Barr JT, Gordon MO and the CLEK Study Group. Scarring and contact lens fit in keratoconus: results from the CLEK (Contact Lens Evaluation in Keratoconus) screening study. *Invest Ophthalmol Vis Sci* 1991; 32(4,suppl):738

Barr JT, Gordon MO, Zadnik K, Edrington TB and the CLEK Study Group. Method for standardizing photographic evaluation of corneal scarring. *Invest Ophthalmol Vis Sci* 1991; 32(4,suppl):1221

Zadnik K, Gordon MO, Barr JT, Edrington TB. Profile of keratoconus patients undergoing penetrating keratoplasty. *Optometry and Vision Science* 1991; 68(12s):33

Barr JT, Gordon MO, Zadnik K, Edrington TB. Corneal photography and grading of corneal scarring photographs - a standardized procedure. *Optometry and Vision Science* 1991; 68(12s):34

Edrington TB, Barr JT, Zadnik K, Gordon MO. A standardized rigid contact lens fitting protocol for keratoconus. *Optometry and Vision Science* 1991; 68(12s):105

Barr JT, Gordon MO, Zadnik K, Edrington TB, and the Contact Lens Evaluation in Keratoconus Study Group. A standardized procedure for corneal photography and grading of corneal scarring in keratoconus. *Invest Ophthalmol Vis Sci* 1992; 33(4,suppl):771

Burger DS, Gordon MO, Zadnik K, Barr JT, Edrington TB, and the Contact Lens Evaluation in Keratoconus Study Group. A low cost screening survey to assess sample yield and refine study entry criteria. *Invest Ophthalmol Vis Sci* 1992; 33(4,suppl):863

Edrington TB, Gordon MO, Barr JT, Zadnik K, and the Contact Lens Evaluation in Keratoconus Study Group. A standardized method to photodocument and interpret contact lens fluorescein patterns applied to keratoconus. *Invest Ophthalmol Vis Sci* 1992; 33(4,suppl):1295

Edrington TB, Barr JT, Zadnik K, Gordon MO, and the Contact Lens Evaluation in Keratoconus Study Group. You can fit steep and we can prove it: a standardized keratoconus fitting and documentation method. *Optometry and Vision Science* 1992; 69(12s):153

Schornack JA, Joe J, Edrington TB. A case study of under-utilized interdisciplinary referrals. *Optometry and Vision Science* 1992; 69(12s):50

Zadnik K, Barr JT, Edrington TB, Gordon MO, and the Contact Lens Evaluation in Keratoconus Study Group. Feasibility of randomizing keratoconus patients to flat versus steep contact lenses. *Optometry and Vision Science* 1992; 69(12s)

Barr JT, Zadnik K, Edrington TB, Gordon MO, and the Contact Lens Evaluation in Keratoconus Study Group. Corneal photodocumentation and photograph reading method for the Contact Lens Evaluation in Keratoconus (CLEK) - 150 eye study. *Optometry and Vision Science* 1992; 69(12s):70

Edrington TB, Hsue H, Caroline PJ, Watanabe RK. The effects of interpalpebral and lid attachment contact lens fitting techniques on corneal topography. *Optometry and Vision Science* 1992; 69(12s):152

Barr JT, Gordon MO, Zadnik K, Edrington TB, and the CLEK Study Group. Corneal findings in the Contact Lens in Keratoconus screening study. *Invest Ophthalmol Vis Sci* 1993; 34(4,suppl):980

Edrington TB, Gordon MO, Zadnik K, Barr JT, and the CLEK Study Group. Achieving and maintaining a comfortable apical clearance RGP contact lens fit in keratoconus. *Invest Ophthalmol Vis Sci* 1993; 34(4,suppl):1005

McKenney CD, Land JK, Chalmers RL, Long WD, Barr JT, Begley CG, and Edrington TB. Variability and correlation of corneal staining in contralateral eyes of hydrogel lens wearers. *Invest Ophthalmol Vis Sci* 1993; 34(4,suppl):

Chalmers RL, Land JK, McKenney, Long WD, Barr JT, Begley CG, and Edrington TB. Zone versus overall grading methods for corneal fluorescein staining. *Invest Ophthalmol Vis Sci* 1993; 34(4,suppl):

Edrington TB, Barr JT, Zadnik K, Gordon MO, and the CLEK Study Group. Selection of initial trial fitting RGP contact lens base curve radius in keratoconus. *Optometry and Vision Science* 1993; 70(12s):39

Marsden HJ, Joe JJ, and Edrington TB. The relationship between corneal eccentricity and improvement in visual acuity in orthokeratology. *Optometry and Vision Science* 1993; 70(12s):139

Simmons P, Sun C, Yamamoto B, and Edrington T. Comparison of surfactant cleaning times on protein deposition on hydrogel lenses. *Optometry and Vision Science* 1993; 70(12s):144

Barr JT, Van Otteren D, Edrington TB, Zadnik K, Gordon MO, and the CLEK Study Group. Prescriber and reader agreement using a standard method to photodocument contact lens fluorescein patterns in keratoconus. *Optometry and Vision Science* 1993; 70(12s):21-2

Zadnik K, Barr JT, Edrington TB, Gordon MO, and the CLEK Study Group. Scarring and visual acuity in keratoconus. *Optometry and Vision Science* 1993; 70(12s):22

Begley CG, Edrington TB, and Chalmers RL. Effect of lens care systems on corneal fluorescein staining in hydrogel lens wearers. *Optometry and Vision Science* 1993; 70(12s):143

Edrington TB, Chang L, and Lee D. Changes in myopia induced by hydrogel contact lens wear. *Optometry and Vision Science* 1993; 70(12s):141-2

Barr JT, Gordon MO, Zadnik K, Edrington TB, and the CLEK Study Group. Thirty keratoconus patients randomized to two contact lens treatment methods. *Invest Ophthalmol Vis Sci* 1994; 35(4,suppl):

Edrington TB, Zadnik K, Gordon MO, Barr JT, and the CLEK Study Group. Fellow eyes of corneal grafts are at risk for keratoconus disease progression. *Invest Ophthalmol Vis Sci* 1994; 35(4,suppl):

Barr JT, Zadnik K, Gordon MO, Edrington TB and the CLEK Study Group. The collaborative longitudinal evaluation of keratoconus (CLEK) study: historical data and study design. *Optometry and Vision Science* 1994; 71(12s):33

Marsden HJ, Joe JJ, Edrington TB. Changes in corneal eccentricity with orthokeratology. *Optometry and Vision Science* 1994; 71(12s)

Pfondevida C, Lee M, Simmons PA, Edrington TB, Wechsler S. Comparison between evening and morning surfactant cleaning of hydrogel contact lenses. *Optometry and Vision Science* 1994; 71(12s)

Ly VT, Edrington TB. Unilateral steepening of the superior cornea: a case report. *Optometry and Vision Science* 1994; 71(12s)

Welder WJ, Young CK, Edrington TB, De Land PN. Consistency of vision, lens rotation, and comfort of CIBA Focus Toric monthly replacement soft contact lenses. *Optometry and Vision Science* 1994; 71(12s)

Zadnik K, Barr JT, Gordon MO, Edrington TB, and the CLEK Study Group. Standardization of clinical techniques. *Optometry and Vision Science* 1995;72(12s):15-6

Chen JCH, Marsden HJ, Edrington TB. Aspheric rigid contact lens design to rehabilitate contact lens induced inferior corneal steepening: a case report. *Optometry and Vision Science* 1995;72(12s):73

Simmons PA, Edrington TB, Lao KF, Le LT. Efficacy of disinfection systems for in-office storage of hydrogel contact lenses. *Optometry and Vision Science* 1995;72(12s):150

Ly VT, Simmons PA, Edrington TB, Wechsler S, DeLand PN. The efficacy of hand-washing procedures on microbial contamination of hydrogel contact lenses. *Optometry and Vision Science* 1995;72(12s):174

Zadnik K, Bullimore MA, Barr JT, Gordon MO, Edrington TB, and the CLEK Study Group. Recruitment for a large-scale clinical study via the World Wide Web and the Internet. *Invest Ophthalmol Vis Sci* 1996;37(3,suppl):S305

Edrington TB, Barr JT, Zadnik K, Gordon MO, and the CLEK Study Group. A new measure of disease severity in keratoconus. *Invest Ophthalmol Vis Sci* 1996;37(3,suppl):S557

Bullimore MA, Zadnik K, Barr JT, Gordon MO, Edrington TB, and the CLEK Study Group. Recruitment for a large-scale clinical study via the Internet. *Optometry and Vision Science* 1996;73(12s):92

Garriott RS, Shin JA, Edrington TB. Rigid contact lens management of trauma-induced irregular cornea in a pediatric patient. *Optometry and Vision Science* 1996;73(12s):122

Edrington TB, Zadnik K, Barr JT, Gordon MO, and the CLEK Study Group. Rigid contact lens fitting relationships in keratoconus: standard of care. *Optometry and Vision Science* 1996;73(12s):230

Barr JT, Zadnik K, Edrington TB, Gordon MO, and the CLEK Study Group. Agreement between clinicians and photograph readers in the Collaborative Longitudinal Evaluation of Keratoconus (CLEK) Study. *Optometry and Vision Science* 1996;73(12s):230

Chen JCH, Edrington TB, Marsden HM. A retrospective study to identify and characterize pellucid marginal corneal degeneration. *Optometry and Vision Science* 1996;73(12s):231

Rasner VL, Marsden HM, Chen JCH, Edrington TB. Pre-presbyopic convergence excess and accommodative dysfunction treated with aspheric multifocal RGP contact lenses: a case study. *Optometry and Vision Science* 1996;73(12s):233

Shin JA, Garriott RS, Edrington TB. Management of a patient with Goldenhar's syndrome and retinitis pigmentosa. *Optometry and Vision Science* 1996;73(12s):234

Barr JT, Pierce GE, Edrington TB, Zadnik K, Gordon MO, and the CLEK Study Group. Baseline test-retest findings of corneal scarring in the CLEK Study. *Invest Ophthalmol Vis Sci* 1997;38(4,suppl):S132

McMahon T, Shin J, Newlin A, Edrington T, Sugar J, Zadnik K. Discordance for keratoconus in two pairs of monozygotic twins. *Invest Ophthalmol Vis Sci* 1997;38(4,suppl):S960

Tsang TY, Shin JA, Edrington TB, Chen JCH, Marsden HJ. Contact lens management of pre and post corneal hydrops in a keratoconus patient: a case report. *Optometry and Vision Science* 1997;74(12s):90

Edrington TB, Szczotka LB, Begley CG, Burger DS, Wilson BS, Zadnik K, Barr JT, Gordon MO and The CLEK Study Group. Repeatability of two corneal curvature assessments in keratoconus: keratometry and the first definite apical clearance lens. *Optometry and Vision Science* 1997;74(12s):149

Stonebraker KM, Chivers DA, Edrington TB, Kinney KA, Osborn KE, DeLand P. Corneal staining in hydrogel contact lens wearers. *Optometry and Vision Science* 1997;74(12s):200

Barr JT, Edrington TB, Zadnik K, Gordon MO and The CLEK Study Group. Collaborative Longitudinal Evaluation of Keratoconus (CLEK) Study: baseline demographics and clinical characteristics. *Invest Ophthalmol Vis Sci* 1998;39(4,suppl):s67

Edrington TB, Szczotka LB, Burger DS, Chun MW, Janoff AM, Olafsson HE, Wilson BS, Gordon MO and The CLEK Study Group. Collaborative Longitudinal Evaluation of Keratoconus (CLEK) Study: rigid contact lens fitting relationships. *Invest Ophthalmol Vis Sci* 1998;39(4,suppl):s343

Walline JJ, Gordon MO, Edrington TB, Barr JT, Zadnik K and The CLEK Study Group. Quality of life in keratoconus. *Invest Ophthalmol Vis Sci* 1998;39(4,suppl):s668

Walline JJ, Edrington TB, Barr JT, Zadnik K, Gordon MO and The CLEK Study Group. Health related quality of life in keratoconus. *Optometry and Vision Science* 1998;75(12s):

Tsang TY, Edrington TB, DeLand P. Clinical evaluation of Wesley-Jessen FreshLook toric disposable hydrogel contact lenses. *Optometry and Vision Science* 1998;75(12s):

Abo JT, Kame GY, Kame RT, Edrington TB, Herman JP, DeLand P. Glassy corneal striae. *Optometry and Vision Science* 1998;75(12s):

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Barr JT, Zadnik K, Gordon MO, Edrington TB, McMahon TT and The CLEK Study Group. Correlates of corneal scarring in the Collaborative Longitudinal Evaluation of Keratoconus (CLEK) Study. *Optometry and Vision Science* 1998;75(12s):

Ho SK, Lau KC, Simmons PA, Edrington TB, Vehige JG, DeLand P. A quantitative comparison of the modified Lowry assay and ninhydrin assay techniques for determining protein deposition on high water content hydrogel contact lenses. *Optometry and Vision Science* 1998;75(12s):

Zadnik K, Barr JT, Edrington TB, Wilson BS, Nichols JJ, Gordon MO and The CLEK Study Group. Impact of scarring in keratoconus. *Optometry and Vision Science* 1998;75(12s):

Edrington TB, Barr JT, Schechtman KB, Fink BA, Pierce GE, Pensyl CD, Zadnik K, Gordon MO and The CLEK Study Group. Collaborative Longitudinal Evaluation of Keratoconus (CLEK) Study: corneal scarring at baseline and repeatability of detection. *Optometry and Vision Science* 1998;75(12s)

Barr JT, Gordon MO, Zadnik K, Edrington TB, McMahon TT, Everett DF and The CLEK Study Group. Incident corneal scarring estimates in the Collaborative Longitudinal Evaluation of Keratoconus (CLEK) Study. *Invest Ophthalmol Vis Sci* 1999;40(4):S769

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Edrington TB, Barr JT, Zadnik K, Fink BA, Nichols JJ, Gordon MO and The CLEK Study Group. Correlations of corneal scarring with clinical measures and patient outcomes at baseline in the Collaborative Longitudinal Evaluation of Keratoconus (CLEK) Study. *Invest Ophthalmol Vis Sci* 1999;40(4):S911

Nguyen R, Norris NL, Cotter SA, Schornack JA, Edrington TB. Management of convergence excess with Acuvue bifocal soft contact lenses: a case report. *Optometry and Vision Science* 1999;76(12s):47

Shin JA, Edrington TB. Pellucid marginal corneal degeneration and keratoconus in fellow eyes: case reports. *Optometry and Vision Science* 1999;76(12s):54

Melton AD, Melton RJ, Edrington TB, Melton JW, Bullimore MA, De Land P. A comparison of monovision: contact lenses versus laser refractive surgery. *Optometry and Vision Science* 1999;76(12s):175

Edrington TB, Gundel RE, Libassi DP, Wagner H, Pierce GE, Walline JJ, Barr JT, Wilson BS, Gordon MO and The CLEK Study Group. The effect of rigid contact lens peripheral clearance on patient comfort in the Collaborative Longitudinal Evaluation of Keratoconus (CLEK) Study. *Optometry and Vision Science* 1999;76(12s):210

Barr JT, Zadnik K, Gordon MO, Edrington TB, McMahon TT, Everett DF and The CLEK Study Group. Estimating incident corneal scarring in the Collaborative Longitudinal Evaluation of Keratoconus (CLEK) Study. *Optometry and Vision Science* 1999;76(12s):213

Pierce GE, Fink BA, Barr JT, Edrington TB, Schechtman KB, Jeandervin M, Flom R, Zadnik K and The CLEK Study Group. A comparison of two methods of evaluating cornea-to-contact lens base curve fluorescein patterns in keratoconus. *Invest Ophthalmol Vis Sci* 2000;41(4):S72

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Shin JA, Chen JCH, Edrington TB, Marsden HJ. Management of patients with pellucid marginal degeneration: case reports. *Optometry and Vision Science* 2000;77(12s):168

Pierce GE, Barr JT, Edrington TB, Gordon MO, Jeandervin M, Flom RE, Fink BA, Zadnik K. A technique to improve the agreement between two methods of evaluating cornea-to-contact lens base curve fluorescein patterns in the CLEK Study. *Optometry and Vision Science* 2000;77(12s):249

Lee LH, Marsden HJ, Edrington TB. Evaluation of the effect of clear and yellow tinted rigid (RGP) contact lenses on visual acuity and contrast sensitivity of post-LASIK patients. *Optometry and Vision Science* 2000;77(12s):254

Barr JT, Gordon MO, Wilson BS, Zadnik K, Edrington TB, McMahon TT, Everett DF, The CLEK Study Group. Factors associated with incident corneal scarring in the Collaborative Longitudinal Evaluation of Keratoconus (CLEK) Study. *Invest Ophthalmol Vis Sci* 2001;42(4):S883

Barr J, Zadnik K, Edrington T, McMahon T, Gordon M, Wilson B, The CLEK Study Group. Estimate of and factors associated with incident corneal scarring in the Collaborative Longitudinal Evaluation of Keratoconus (CLEK) Study. *Optometry and Vision Science* 2001;78(12s):26

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Edrington T, Gundel R, Libassi D, Wagner H, Herce G, Walline J, Barr J, Olafsson H, Achtenberg J, Wilson B. Variables affecting rigid contact lens comfort in the Collaborative Longitudinal Evaluation of Keratoconus (CLEK) Study. *Optometry and Vision Science* 2001;78(12s):58

Zadnik K, Barr JT, Edrington TB, McMahon TT, Gordon MO, CLEK Study Group. Flat vs steep: the effect of rigid contact lens fitting method in keratoconus. *Invest Ophthalmol Vis Sci* 2002

Barr JT, Zadnik K, Edrington T, McMahon T. Visual acuity and quality of life after penetrating keratoplasty. *Optometry and Vision Science* 2002;79(12s):5

Yu JA, Edrington T. Management of iatrogenic keratectasia after laser in situ keratomileusis (LASIK) for myopia: case reports. *Optometry and Vision Science* 2002;79(12s):119

Chalmers R, Begley C, Venkataraman K, Mertzanis P, Abetz L, Snyder C, Simpson T, Edrington T, Caffery B, Nelson JD. Clinical diagnostic criterion for dry eyes: a comparison of signs between Sjogren's Syndrome, dry eye subjects and normal controls. *Optometry and Vision Science* 2002;79(12s):255

Begley C, Chalmers R, Venkataraman K, Caffery B, Edrington T, Simpson T, Snyder C, Nelson JD, Mertzanis P, Abetz L. Clinical signs and symptoms in dry eye and Sjogren's Syndrome patients. *Optometry and Vision Science* 2002;79(12s):307

Zadnik K, Schechtman KB, Wilson BA, Barr JT, Edrington TB, McMahon TT, Everett DF, Gordon MO, CLEK Study Group. Visual acuity loss in keratoconus. *Invest Ophthalmol Vis Sci* 2003

Nichols JJ, Steger-May KJ, Edrington TB, Zadnik K, CLEK Study Group. The relation between disease asymmetry and severity in keratoconus. *Invest Ophthalmol Vis Sci* 2003

Twa M, Nichols JJ, Joslin C, Kollbaum P, Edrington T, Schanzlin DJ. Characteristics of corneal ectasia after myopic LASIK. *Invest Ophthalmol Vis Sci* 2003

Twa MD, Nichols J, Kollbaum PS, Joslin CE, Edrington TB, Bullimore MA, Mitchell GL, Cruickshanks KJ, Schanzlin DJ. Early onset corneal ectasia after LASIK. *Optometry and Vision Science* 2003;80(12s):14

Tran L, Edrington TB, Yu JA. Contact lens management of a post-radial keratotomy patient with a prism-ballast toric GP lens design. *Optometry and Vision Science* 2003;80(12s):

Jung J, Edrington TB, Yu JA. Contact lens management of a patient presenting with microcornea, pellucid marginal degeneration and aphakia. *Optometry and Vision Science* 2003;80(12s):

Chiu D, Barnhart A, Edrington TB, DeLand P. The effect of downgaze on soft toric contact lens rotation. *Optometry and Vision Science* 2003;80(12s):

Yu JA and Edrington TB. Contact lens management of iatrogenic keratectasia after laser *in situ* keratomileusis (LASIK) for myopia: case report. *Optometry and Vision Science* 2003;80(12s):

Edrington TB, Joslin CE, Wilson B, Gordon M, Zadnik K. Clinical outcomes in keratoconus following penetrating keratoplasty. E-2895 *IOVS* 2004;45:1587

Paugh J, Marsden H, Edrington T, Guzman E, DeLand P, Simmons P, Vehige J. Can Polyhexanide preservative staining be ameliorated in vivo? *Optometry and Vision Science* 2004;81(12s):79

Tran L, Edrington TB, Management of a post-penetrating keratoplasty patient using a hyper Dk piggy-back contact lens system. *Optometry and Vision Science* 2004;81(12s):66

Tran L, Edrington TB, GP lens management of a keratoconus patient status post-hydrops and intracorneal ring implants (Intacs). *Optometry and Vision Science* 2004;81(12s):66

Begley CG, Chalmers RL, Liu H, Smith JA, Edrington TB, Simpson TL, Himebaugh NL. From tear instability to dry eye: a unifying hypothesis. B829 *IOVS* 2005;46:4471

McMahon TT, Edrington TB, Szczotka-Flynn L, Olafsson HE, Davis LJ, Schechtman KB, CLEK Study Group. Longitudinal changes in corneal curvature in keratoconus. B152 *IOVS* 2005;46:4949

## **PUBLICATIONS - CLEK STUDY GROUP**

Davis LJ, Barr JT, Pierce G, CLEK Study Group. Development of a grading protocol to identify Vogt's striae and Fleischer's ring in keratoconus. *Optometry and Vision Science* 73 (suppl):94, 1996.

Zadnik K, Davis LJ, McMahon TT, Schornack JA, Gordon MO, CLEK Study Group. Repeatability of visual acuity measurement in keratoconus. *Optometry and Vision Science* 73 (suppl):68, 1996.

Szczotka LB, Friedman NE, Davis LJ, McMahon TT, CLEK Study Group. Videokeratographic data quality and disease severity in keratoconus. *Invest Ophthalmol Vis Sci* 1997;38(4, suppl):S1090

Zadnik K, Gordon MO, Schechtman K, Davis LJ, McMahon TT, Schornack JA, CLEK Study Group. Visual acuity repeatability in keratoconus. *Invest Ophthalmol Vis Sci* 1997;38(4,suppl):S845

Gordon MO, Achtenberg J, Schornack JA, Pensyl CD, Barnhart LA, McMahon TT, Roediger TA, Zadnik K, and the CLEK Study Group. Collaborative Longitudinal Evaluation of Keratoconus (CLEK) Study: quality of life. *Optometry and Vision Science* 1997;74(12s):94

Davis LJ, Schechtman K, Shin JA, Begley CG, Gordon MO, Zadnik K, and the CLEK Study Group. Repeatability of manifest refraction and contact lens over-refraction in keratoconus. *Optometry and Vision Science* 1997;74(12s):147

Zadnik K, Gordon MO, Wagner H, Sterling JL, Shin JA, Jameson M, Everett DF, and the CLEK Study Group. Baseline patient-reported findings from the Collaborative Longitudinal Evaluation of Keratoconus (CLEK) Study. *Optometry and Vision Science* 1997;74(12s):148

Raasch TW, Szczotka LB, McMahon TT, Friedman NE, Davis LJ and the CLEK Study Group. Quantitative features of corneal topography in keratoconus. *Optometry and Vision Science* 1997;74(12s):148

Davis LJ, Barr JT, Pierce GE, Gordon MO and The CLEK Study Group. Test-retest reliability of grading the presence of Vogt's striae and Fleischer's ring by photography. *Invest Ophthalmol Vis Sci* 1998;39(4,suppl):s67

Raasch TW, McMahon TT, Szczotka LB, Friedman NE, Anderson RJ, Davis LJ and The CLEK Study Group. Fundamental component differences in topography between keratoconic and normal corneas. *Invest Ophthalmol Vis Sci* 1998;39(4,suppl):s635

Gordon MO, Schechtman KB, Davis LJ, McMahon TT, Schornack J, Zadnik K and the CLEK Study Group. Visual acuity repeatability in keratoconus: impact on sample size. *Optometry and Vision Science* 1998;75(4):249-57

Zadnik K, Schechtman KB, Nichols JJ, Fink BA, Tyler J, Rosenstiel CE, Steger-May K and The CLEK Study Group. Asymmetry in keratoconus. *Invest Ophthalmol Vis Sci* 2000;41(suppl):S678

Shen JF, McMahon TT, Cheng EL, Sugar J, Yue BYJT, Anderson R, Begley C, Zhou Z and The CLEK Study Group. Lysosomal hydrolase staining of impression cytology specimens in keratoconus. *Invest Ophthalmol Vis Sci* 2000;41(suppl)S271

## **CONTINUING EDUCATION COURSES PRESENTED**

### **To Optometrists**

November 1980 - Measurement of Intraocular Pressure (SCCO)

1983 - Binocular Refraction (San Diego Naval Interservice Seminar)

March 1983 - Panelist at Annual Review of Contact Lenses

April 1984 - Contact Lens Deposits (SCCO Grand Rounds)

April 1984 - Giant Papillary Conjunctivitis (SCCO Grand Rounds)

February 1985 - Fitting Rigid Toric Contact Lenses (California Optometric Association Congress)

March 1985 - Panelist at Annual Review of Contact Lenses

October 1985 - Contact Lens Update (Nebraska Optometric Association)

March 1986 - Contact Lens Update (SCCO Winter Carnival, Jackson Hole, Wyoming)

July 1986 - Fitting Hard Toric Contact Lenses (SCCO)

January 1987 - Extended Wear Hard Gas Permeable Contact Lenses

January 1987 - Fitting Hard Toric Contact Lenses (Leonard Bronstein)

February 1987 - Clinical Management of Hard Gas Permeable Contact Lens Patients (North Central States Optometric Conference)

February 1987 - Contact Lens Complications (North Central States Optometric Conference)

February 1987 - Fitting Hard Toric Contact Lenses (California Optometric Association Congress)

April 1987 - Hard Contact Lens Fitting (SCCO)

April 1987 - Hard Gas-Permeable Extended Wear (San Diego County Optometric Society)

May 1987 - Management of Contact Lens Complications (Kern County Society)

May 1987 - Fitting Rigid Gas Permeable Extended Wear Contact Lenses (Kern County Society)

August 1987 - Fitting Rigid Toric Contact Lenses/Efficacy of Enzymatic Cleaners (Northeastern State University)

April 1988 - Hard Gas-Permeable Contact Lens Fitting (SCCO)

August 1988 - Fitting Rigid Toric Contact Lenses/Protein Deposition on Hydrophilic Contact Lens (Northeastern State University)

May 1989 - Refitting Long Term PMMA Contact Lens Patients (COA Pacific Coast Contact Lens Symposium)

July 1989 - SPE/CPE Bitoric Indications and Design (Northeastern State University)

September 1989 - Management of Keratoconus and SPE/CPE Bitoric Indications and Design (Orange County Optometric Society)

October 1989 - Bitoric RGP Indications and Designs (Nebraska Optometric Association)

October 1989 - Management of Keratoconus with RGP Contact Lenses (Nebraska Optometric Association)

October 1989 - Management of Contact Lens Complications (Nebraska Optometric Association)

November 1989 - Contact Lens Grand Rounds (SCCO)

December 1989 - Contact Lens Care Products (SCCO)

April 1990 - The Effect of Secondary Curve Liftoff on Peripheral Corneal Desiccation (Southern California Chapter of the American Academy of Optometry)

May 1990 - Trouble Shooting Contact Lenses (SCCO)

June 1990 - Management of Keratoconus (SCCO)

November 1990 - Contact Lens Issues and Answers (SCCO and NEWENCO Annual Review of Contact Lenses and Anterior Segment Disease)

March 1991 - Bitoric RGP Indications and Designs (Mojave Desert Optometric Society)

March 1991 - Management of Keratoconus with RGP Contact Lenses (Mojave Desert Optometric Society)

September 1991 - RGP Contact Lens Fitting (Northeastern State University)

September 1991 - Spherical and Cylinder Power Effect Bitoric RGP Contact Lenses (Northeastern State University)

September 1991 - Management of Keratoconus with RGP Contact Lenses (Northeastern State University)

September 1991 - Clinical Applications of Contact Lens Research (SCCO)

September 1991 - Clinical Applications of Contact Lens Research (Tri-County Optometric Society)

November 1991 - Difficult Contact Lens Cases (Inland Eye Institute)

December 1991 - Keratoconus Grand Rounds: Clinical Identification and Management (American Academy of Optometry, Ellerbrock Memorial Continuing Education Courses)

March 1992 - Contact Lens Grand Rounds: Clinical Identification and Management (SCCO)

May 1992 - Management of Keratoconus (SCCO)

August 1992 - Clinical Applications of Contact Lens Research (SCCO)

September 1992 - Clinical Applications of Contact Lens Research (San Fernando Valley Optometric Society Fall Continuing Education Seminar)

September 1992 - Contact Lens Management of the Keratoconus Patient (San Fernando Valley Optometric Society Fall Continuing Education Seminar)

October 1992 - Contact Lens Case Presentations (SCCO Alumni Reunion)

April 1993 - Contact Lens Weekend Update (Solvang, CA - SCCO CE)

July 1993 - You Can Fit Irregular Corneas With RGPs (Contact '93)

July 1993 - Clinical Applications of Contact Lens Research II (SCCO)

September 1993 - Clinical Applications of Contact Lens Research (South Bay Optometric Society)

- September 1993 - RGP Management of Astigmatism (Northeastern State University)
- November 1993 - Bitoric RGP Contact Lenses (Orange County Optometric Society)
- December 1993 - Keratoconus Grand Rounds: Clinical Identification and Management (AAO Ellerbrock Memorial Continuing Education Program)
- January 1994 - Clinical Applications of Contact Lens Research (San Diego County Optometric Society)
- January 1994 - Contact Lens Management of the Keratoconus Patient (San Diego County Optometric Society)
- January 1994 - Contact Lens Patient Management Issues (SCCO)
- February 1994 - Contact Lens Weekend Update (Temecula, CA - SCCO CE)
- April 1994 - RGP Grand Rounds (California Optometric Association Contact Lens and Anterior Segment Symposium, Monterey, CA)
- August 1994 - Clinical Applications of Contact Lens Research (Rio Hondo Optometric Society)
- August 1994 - Management of the Keratoconus Patient (Rio Hondo Optometric Society)
- August 1994 - Bitoric RGP Contact Lens Fitting (Rio Hondo Optometric Society)
- August 1994 - Clinical Applications of Contact Lens Research (Kern County Optometric Society)
- September 1994 - Keratoconus (Northeastern State University)
- September 1994 - RGP Management of Astigmatism (Northeastern State University)
- October 1994 - Contact Lens Study Exchange Continuing Education Program (Napa, CA)
- December 1994 - Keratoconus Grand Rounds: Clinical Identification and Management (AAO Ellerbrock Memorial Continuing Education Program)
- February 1995 - Introduction to Computer Assisted Videokeratography (SCCO CE)
- February 1995 - Diagnosis and Management of Keratoconus (SCCO CE)
- March 1995 - Clinical Applications of Contact Lens Research (COA Congress, Sacramento, CA)
- March 1995 - Contact Lens Case Presentation Forum (COA Congress, Sacramento, CA)

- April 1995 - Contact Lens Case Presentation Forum (South Bay Optometric Society)
- August 1995 - Contact Lens Case Presentation Forum (Kern County Optometric Society)
- August 1995 - Contact Lens Study Exchange Continuing Education Program (Monterey, CA)
- September 1995 - RGP Management of Astigmatism (Northeastern University)
- September 1995 - Diagnosis and Management of Keratoconus; Clinical Applications of Contact Lens Research (Northeastern State University)
- October 1995 - Clinical Applications of Contact Lens Research (Sonoma County Optometric Society)
- January 1996 - Contact Lens Case Presentation Forum (San Diego Optometric Society)
- March 1996 - Contact Lens Management of the Keratoconus Patient (California Optometric Association Congress)
- March 1996 - Keratoconus Grand Rounds Workshop (California Optometric Association Congress)
- May 1996 - Contact Lens Management of the Irregular Cornea (COA Contact Lens & Anterior Segment Symposium)
- August 1996 - Contact Lens Management of High and Irregular Astigmatism (SCCO CE)
- September 1996 - Bitoric RGP Contact Lenses (Northeastern State University)
- September 1996 - Keratoconus (Northeastern State University)
- September 1996 - Contact Lens Case Presentations (AOSA Western Regional Conference)
- September 1996 - Answers to Commonly Asked Contact Lens Questions (AOSA Western Regional Conference)
- December 1996 - How the First Definite Apical Clearance Lens (FDA CL) Can Help You Treat Keratoconus (American Academy of Optometry Annual Meeting Scientific Program)
- October 1997 - Diagnosis and Management of Keratoconus (Alumni Reunion Weekend SCCO)
- November 1997 - Contact Lens Management of Regular and Irregular Astigmatism (SCCO)
- May 1998 - Diagnosis and Management of Keratoconus (U.S. Indian Health Service)
- September 1998 - Irregular Corneas (SCCO)

September 1998 - Contact Lens Update (SCCO Faculty Enhancement)

September 1998 - Bitoric Rigid Gas Permeable Contact Lenses (Northeastern State University)

September 1998 - Keratoconus (Northeastern State University)

November 1998 - The First Definite Apical Clearance Lens in Keratoconus (BobFest, University of California, Berkeley)

December 1998 - Irregular Cornea Video Grand Rounds (AAO Ellerbrock, San Francisco, CA)

January 1999 - A New Method for Assessing Keratoconus Progression (CLAO, Las Vegas, NV)

February 1999 - Irregular Cornea Video Grand Rounds (SCCO)

April 1999 - CLEK Study: We Have Data & Pellucid Corneal Degeneration (CLSEX CE, Solvang CA)

October 1999 - Irregular Cornea Video Grand Rounds (SCCO Alumni Weekend)

December 1999 - Irregular Cornea Video Grand Rounds (AAO Ellerbrock, Seattle, WA)

July 2000 – Astigmatism and Contact Lenses (Visiting Scholars Program, New England College of Optometry)

July 2000 – The Collaborative Longitudinal Evaluation of Keratoconus (CLEK) Study (Visiting Scholars Program, New England College of Optometry)

September 2000 - Keratoconus (Northeastern State University)

October 2000 – Keratoconus and Pellucid Marginal Degeneration (Contact Lens Study Exchange, SCCO CE, Sonoma, CA)

October 2000 – Contact Lens Update (SCCO)

November 2000 – Keratoconus; Management of Irregular Astigmatism (Fall RGP Contact Lens Symposium, SCCO CE, Fullerton, CA)

December 2000 – Rigid Contact Lens Management of Challenging Conditions: Video Grand Rounds (AAO Ellerbrock Memorial Continuing Education, Orlando, FL)

April 2001 – Fitting the Irregular Cornea (Nebraska Optometric Association Spring Conference, Omaha, NE)

April 2001 – Contact Lens Problem Solving (Nebraska Optometric Association Spring Conference, Omaha, NE)

June 2001 – Results from The CLEK Study and Pellucid Marginal Corneal Degeneration (SCCO)

November 2001 – Prescribing RGP Contact Lenses for the Irregular Cornea (SCCO)

November 2001 – Prescribing RGP Contact Lenses for the Irregular Cornea (Hawaiian Optometric Association)

December 2001 – Diagnosis and Management of Keratoconus (AAO Ellerbrock Memorial Continuing Education, Philadelphia, PA)

January 2002 – The CLEK Study and Keratoconus (Scottish Specialist Optometric Training, Glasgow, Scotland)

January 2002 – Contact Lens Problem Solving (EyeCare 3000, Glasgow, Scotland)

January 2002 – The CLEK Study (Glasgow Caledonia University, Glasgow, Scotland)

May 2002 - Contact Lens Update (AFOS/HIS Biennial Eye Care Meeting, Fullerton, CA)

November 2002 – Basic to Advanced GP Fitting Cases (GP Lens & Therapeutics Symposium, SCCO)

December 2002 – Diagnosis and Management of Keratoconus (AAO Ellerbrock Memorial Continuing Education, San Diego, CA)

February 2003 – Keratoconus Fitting (Arizona Optometric Association, Bronstein Contact Lens Seminar)

March 2003 – Diagnosis and Management of Irregular Corneas (Central California Vision Seminar)

March 2003 – Cornea and Contact Lens Case Presentations (Central California Vision Seminar)

March 2003 – Silicone Hydrogels (Central California Vision Seminar)

October 2003 – Contact Lens Management of Patients Presenting with Challenging Corneal Conditions (SCCO Alumni Reunion)

December 2003 – Diagnosis and Management of Keratoconus (AAO Ellerbrock Memorial Continuing Education, Dallas, Tx)

January 2004 – Toric Gas Permeable Lenses: Patient Selection, Lens Design and Problem Solving (Arizona Optometric Association, Bronstein Contact Lens Seminar)

February 2004 – Case Series of Challenging Cornea and Contact Lens Patients (Ocular Skisis, Aspen, CO)

May 2004 – Contact Lens Update (Indian Health Service Biennial Eye Care Meeting, Fullerton, CA)

August 2004 – Management of Patients Presenting with Challenging Corneal Conditions (Ocular Infections, Glaucoma & Anterior Segment Disorders, SCCO, Torrance, CA)

December 2004 – Diagnosis and Management of Keratoconus (AAO Annual Meeting, Tampa, FL)

December 2004 – GP Contact Lens Management of Irregular Corneas: Going Big! (AAO Annual Meeting, Tampa, FL)

### **To Paraoptometrists**

November 1981 - Case History Taking (Monterey Pathology Seminar)

November 1981 - Visual Field Testing (Monterey Pathology Seminar)

1982 - Solutions (Optifair West)

October 1982 - Solutions (Monterey Pathology Seminar)

October 1982 - Ocular Emergencies (Monterey Pathology Seminar)

October 1983 - Contact Lens Update (Monterey Pathology Seminar)

May 1989 - Rigid Gas Permeable Contact Lenses (COA Pacific Coast Contact Lens Symposium)

May 1989 - Soft Contact Lens Applications (COA Pacific Coast Contact Lens Symposium)

March 1996 - Clinical Applications of Contact Lens Research (California Optometric Association Congress)

### **MEMBERSHIP IN THE FOLLOWING ORGANIZATIONS**

- American Academy of Optometry (Fellow / Diplomate Cornea and Contact Lens Section 1994-present)
  - Diplomate Written Examination 1998-2000
  - Diplomate Case Report Chair 2000-2002
  - Diplomate Practical Chair 2002-2004
  - Diplomate Awards Chair 2004-present
- California Chapter of the American Academy of Optometry
  - Board member 1992 - 2000

- President-elect 1995, President 1996-98
- Association of Contact Lens Educators  
Chairman 1988-90
- Association for Research in Vision and Ophthalmology

**SERVED ON THE FOLLOWING SCCO FACULTY COMMITTEES/GROUPS**

- Clinic Council (Chairman 1989-90)
- Curriculum Committee (Chairman 1988-90)
- SCCO Faculty Council
- Executive Committee Faculty Council
- Secretary-Treasurer of Faculty Council
- Academic Standing and Policy
- Ethics
- Admissions
- Interviews for Admission
- Awards Committee
- Dean's Search Committee
- Institutional Review Board
- Faculty Travel Committee (Chairman 1987-89; 1990-95)
- Student Awards Committee
- Student Research Committee
- Merit and Promotion Committee (Chairman 1996-97; 98-99)
- Faculty Tenure Committee
- Faculty Recruitment Committee